## REMARKS

Claims 8 and 13-15 were rejected under 35 USC 102(b) as being unpatentable over Natsume (US 5,764,487). Additionally claims 9-12 and 16-17 were rejected under 35 USC 103(a) as being unpatentable over Natsume (US 5,764,487) in view of Denzene (US 6,219,258 B1

**Claims 8 and 13-15 rejected under 35 USC 102(b)**

Claims 8 and 13-15 were rejected under 35 USC 102(b) as being unpatentable over Natsume (US 5,764,487). Specifically, the office action asserts that Natsume teaches an engine controller comprising a main assembly board 28, a main assembly housing 24,26, and a pre-assembled partitioned circuit assembly having a partitioned circuit element 16 mounted within a partitioned circuit housing 22 and a plurality of connectors 32. The office action further asserts that Natsume teaches at least one main assembly port 20 and that the partitioned circuit assembly can be inserted into this port through the main housing.

The Applicant respectfully traverses the Examiner's rejections to claims 8 and 13-15. The Applicant traverses the Examiner's rejections on several grounds. The Applicant asserts most significantly that the wiring harnesses 12, relays 14 and fuses 16 (of the Natsume reference) are not partitioned circuit assemblies as claimed by the present invention. They are in fact electrical components used within a circuit assembly but are not circuit assemblies themselves. Although this assertion itself is sufficient support within the prosecution history to both support an allowance as well as adequately serve as a limitation, the Applicant respectfully calls the Examiner's attention to paragraph 15 of the present application. In it the Applicant has described partitioned circuits as adding functions to the main assembly 12. Thus circuits that perform functions are claimed, not mere components within a single circuit.

Additionally, the Applicant respectfully traverses the Examiner's assertion that an engine controller is taught by the Natsume reference. The Applicant respectfully calls the Examiner's attention to column 3 lines 32-34 of the Natsume reference. Natsume teaches a fuse panel located within the passenger compartment of a vehicle. This is not the engine controller claimed by the present invention. Engine controllers are well known elements within vehicle design and are commonly situated within the engine compartment and not the passenger compartment. The large temperature fluctuations and corrosive environment associated with the engine compartment are not shared by the passenger compartment. Henceforth, the common placement of removable components such as fuses within the

passenger compartment would not teach an engine controller with removable partitioned circuits as claimed by the present invention.

The Examiner has asserted that Natsume teaches the use of a main assembly port on an engine controller. The Applicant notes, that no support within the listed prior art supports the contention that the main assembly port is taught or rendered obvious when used on an engine controller. For this and the above discussed traverses, the Applicant respectfully requests reconsideration of the above claims.

**Claims 9-12 and 16-17 rejected under 35 USC 103(a)**

Claims 2, 5, 9, 12, and 16 were rejected under 35 USC 103(a) as being unpatentable over Natsume (US 5,764,487) in view of Denzene (US 6,219,258 B1). The office action acknowledges that Natsume does not teach a press-assembled partition further including a heat sink, the use of passivation material, or a seal element. The office action states, however, that it would be obvious to a person skilled in the art to adapt the pre-assembled circuit assembly of the Natsume reference to include a heat sink, passivation material, and a seal element. The office action further asserts "the applicant is merely attempting to remedy a common problem within the electronics industry, and thus not providing an improvement on an existing product". The Applicant respectfully traverses this rejection as well.

The applicant respectfully asserts that neither the Natsume nor the Denzene reference, either alone nor in combination, teaches a engine controller with a partitioned circuit assembly. Furthermore, the Applicant asserts that the Denzene patent represents non-analogous art. The Denzene patent teaches a circuit assembly for use on outdoor telecommunications boxes. Although these boxes do experience environmental conditions, in general they do not come anywhere near the conditions experienced by an engine controller as claimed by the present invention. The present invention utilizes a partitioned circuit assembly to address an engine controller used in a high vibrational, high temperature, and highly corrosive environment. Similarly, as asserted, the Natsume reference teaches the use of a fuse panel within the passenger compartment of a vehicle. Not only are the components of Natsume not subjected to the environment of an engine compartment, they are not even circuit assemblies. Neither the Natsume patent nor the Denzene patent, either alone or in combination, address or teach such a structure and therefore are inappropriate to use as prior art.

The Applicant would further like to note that the present application has not simply claimed a heat sink to cool an electronic apparatus as asserted by the examiner. The

Applicant calls the Examiner's attention to the fact that the application has claimed an individual heat sink associated with each partitioned circuit portion of an engine controller. The Examiner's assertion that it would be obvious to "adapt the pre-assembled circuit assembly of the Natsume reference to include a heat sink, passivation material, and a seal element" is flawed. The components of Natsume are just that, (fuses, relays, etc). Their size and functions would make individualize heat sinks illogical. The present invention claims "circuit assemblies" which represent a collection of electronic components in the form of a circuit assembly. To individually heat sink partitioned circuits within the engine controller is significantly more that simply (heat sinking a component). Improper attention has been given to this novelty and patentably distinct limitations. Just as the knowledge of a resister may be well known in the electronics industry, its use in particular grouping or arrangement may still be patentably distinct and novel. Present engine controllers commonly utilize a single heat sink arrangement to cool their electronics. By utilizing independent cooling on the partitioned circuit portions of the engine controller, specific heat generating components can be specifically addressed while heat from such components can be isolated from the central controller (see paragraph 17, page 4). This provides a novel utility not associated with present engine controller designs. Furthermore, as previously mentioned, the Applicant asserts that insufficient reasoning has been provided to support an obviousness rejection. No structural comparison between prior art engine controller heat sink designs and those claimed by the present invention were asserted or discussed by the office action.

The office action asserts that Denzene teaches a seal element such that the partitioned circuit assembly becomes sealed to the main assembly housing after insertion. The Applicant respectfully traverses this rejection. The seal element 110 disclosed by the Denzene patent does not, in fact, seal the portioned assembly to the main assembly as claimed by the present invention. Instead, the Denzene patent teaches the use of a seal element 110 to seal the connectors only. Its usage is strictly to protect the electrical connections, not seal the portioned assembly to the main assembly as claimed by the present invention. The Denzene patent uses a conformal coating (see col. 7, lines 8-10) to seal the partitioned circuit, but do not attempt to seal the circuit to the main assembly.

In light of the above explanations, the Applicant respectfully requests the Examiner to withdraw the rejections of claims 8-17.

## CONCLUSION

The Applicant would like to thank the Examiner for his assistance. In light of the above remarks, Applicant submits that all objections and rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited.

Should the Examiner have any questions or comments that would place the application in better condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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